

# TM 11-5826-210-12

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

---

OPERATOR'S AND ORGANIZATIONAL  
MAINTENANCE MANUAL

MAINTENANCE KIT, ELECTRONIC  
EQUIPMENT  
MK-252/ARN



*HEADQUARTERS, DEPARTMENT OF THE ARMY*  
*APRIL, 1960*

## WARNING

Be careful when working on Interconnecting Box J-676/ARN or J-677/ARN. Serious injury or death may result from contact with the LV+ or HV+ test jacks.

## DON'T TAKE CHANCES!

The following voltages are present on the test jacks when operating the equipment:

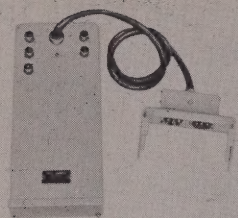
LV+ test jack	28 volts dc.
HV+ test jack	250 volts dc.

TECHNICAL MANUAL }  
 No. 11-5826-210-12 }

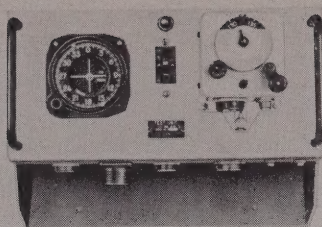
HEADQUARTERS  
 DEPARTMENT OF THE ARMY  
 WASHINGTON 25, D. C., 14 April 1960

## MAINTENANCE KIT, ELECTRONIC EQUIPMENT MK-252/ARN

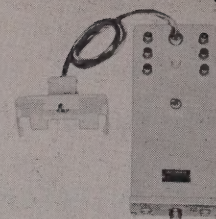
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INTERCONNECTING  
BOX J-676/ARN



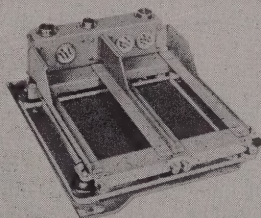
CONTROL, RADIO SET C-984/ARN-30  
AND INDICATOR, COURSE  
ID-453/ARN-30 ON TEST SET  
SUBASSEMBLY MX-2869/ARN



INTERCONNECTING  
BOX J-677/ARN



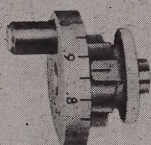
LEAD, TEST CG-1618/U



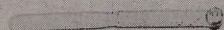
MOUNTING MT-1175/ARN-30A,  
MOUNTING MT-1174/ARN-30A AND  
BASE, STAND MT-2239/ARN



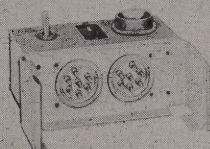
CABLE ASSEMBLY,  
SPECIAL PURPOSE,  
ELECTRICAL  
CX-4867/ARN



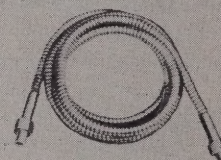
DIAL, CONTROL  
MX-2871/ARN



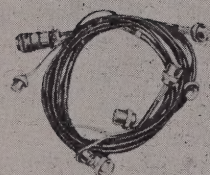
ALIGNMENT TOOL,  
ELECTRONIC EQUIPMENT  
TL-659/U



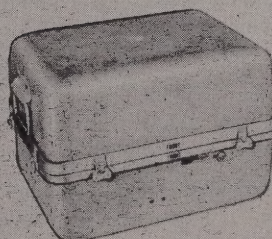
INTERCONNECTING  
BOX J-1107/ARN



SHAFT ASSEMBLY,  
FLEXIBLE  
MX-2870/ARN



WIRING HARNESS,  
BRANCHED  
CX-4866/ARN



CASE, ELECTRICAL EQUIPMENT  
MAINTENANCE KIT  
CY-2693/ARN



TELEPHONE PLUG  
PJ-055B

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Figure 1. Maintenance Kit, Electronic Equipment MK-252/ARN.

# CHAPTER I

## INTRODUCTION

### Section I. GENERAL

#### I. Scope

a. This manual describes Maintenance Kit, Electronic Equipment MK-252/ARN (fig. 1), and covers its installation, operation, and operator's and organizational maintenance. It includes instructions for cleaning and inspection of the equipment, and replacement of parts available to first and second echelon maintenance personnel.

b. In this manual, official nomenclature followed by (\*) is used to indicate all models of an equipment. Thus, Radio Receiving Set AN/ARN-30(\*) represents Radio Receiving Sets AN/ARN-30, AN/ARN-30A, AN/ARN-30B, and AN/ARN-30C.

#### 2. Forms and Records

##### a. Unsatisfactory Equipment Reports.

(1) Fill out and forward DA Form 468 (Unsatisfactory Equipment Report) to the Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N. J., as prescribed in AR 700-38.

(2) Fill out and forward AF TO Form

29 (Unsatisfactory Report) to the Commander, Air Materiel Command, Wright-Patterson Air Force Base, Ohio, as prescribed in AF TO 00-35D-54.

b. *Report of Damaged or Improper Shipment.* Fill out and forward DD Form 6 (Report of Damaged or Improper Shipment) as prescribed in AR 700-58 (Army), Navy Shipping Guide, Article 1850-4 (Navy), and AFR 71-4 (Air Force).

c. *Preventive Maintenance Forms.* Prepare DA Form 11-266 (Maintenance Check List for Signal Equipment (Test Equipment)), in accordance with instructions on page 1 of the form (fig. 13 and 14).

d. *Parts List Form.* Forward DA Form 2028 (Recommended Changes to DA Technical Manual Parts List or Supply Manuals 7, 8, and 9) directly to the Commanding Officer, U.S. Army Signal Equipment Support Agency, Fort Monmouth, N. J., with comments on parts listing.

e. *Comments on Manual.* Forward all other comments on this publication directly to the Commanding Officer, U.S. Army Signal Publications Agency, Fort Monmouth, N. J.

### Section II. DESCRIPTION AND DATA

#### 3. Purpose and Use

The MK-252/ARN provides a means of connecting test equipment (par. 7a) to components of Radio Receiving Set AN/ARN-30(\*) (par. 7b). It is used to test components of the AN/ARN-30(\*) after they have been removed from an aircraft.

#### 4. Technical Characteristics

Input voltage requirements .....28 volts dc.

Maximum current drain ....20 amperes.

Types of signals measured:

Navigation .....Omnirange and  
runway localizer.

Communication .....Visual aural range.

Accuracy of visual signal  
measurements ..... $\pm 2^\circ$ .

## 5. Table of Components

Quantity	Item	Figure No.	Height (in.)	Depth (in.)	Width (in.)	Unit weight (lb)
1	Test Set Subassembly MX-2869/ARN consisting of:	1 and 6	8.8	13.6	9.5	8.8
	1 ea Indicator, Course ID-453/ARN-30-----	1 and 7	3.3	7.2	3.3	
	1 ea Control, Radio Set C-984/ARN-30-----	1 and 8	1.7	3.1	3.1	
	1 ea Mounting MT-1046/ARN-30-----	1 and 6	2.5		3.3	
1	Interconnecting Box J-676/ARN-----	1 and 9	1.9	10.7	4.7	1.5
1	Interconnecting Box J-677/ARN-----	1 and 10	1.9	10.7	4.7	1.4
1	Mounting MT-1175/ARN-30A-----	1 and 5	3.9	13.1	11.	
1	Mounting and base assembly consisting of:	1 and 5	1.2	13.9	11.9	4.5
1 ea	Mounting MT-1174/ARN-30A-----	1 and 5	1.7	11.8	10.9	
1 ea	Base, Stand MT-2239/ARN-----	1 and 5		13.8	11.7	
1	Wiring Harness, Branched CX-4866/ARN-----	1		48 lg		1.7
1	Cable Assembly, Special Purpose, Electrical CX-4867/ARN.	1		20 lg		0.3
1	Interconnecting Box J-1107/ARN-----	1 and 11	4.8	4.9	2	0.8
1	Shaft Assembly, Flexible MX-2870/ARN-----	1		60 lg	0.6 dia	
1	Lead, Test CG-1618/U-----	1		9.8 lg		0.1
2	Telephone Plug PJ-055B-----	1		2.9 lg		0.1
1	Alignment Tool, Electronic Equipment TL-659/U---	1		3.3 lg		0.1
1	Dial, Control MX-2871/ARN-----	1	1.5	1.3 dia		0.1
1	Case, Electrical Equipment Maintenance Kit CY-2693/ARN.	1 and 2	13.9	20.1	14.9	18.5

## 6. Description

The MK-252/ARN (fig. 1) consists of those components (par. 5) that are required for connecting test equipment (par. 7a) to components of Radio Receiving Set AN/ARN-30(\*) (par. 7b). When not in use, the components of the MK-252/ARN are stored in the CY-2693/ARN (fig. 2).

## 7. Additional Equipment Required

Equipment listed in *a* and *b* below are not furnished with the MK-252/ARN but are required for testing components of the AN/ARN-30(\*) *after* they have been removed from an aircraft.

### *a. Test Equipment.*

Quantity	Item	Technical manual
1	Audio Oscillator TS-382A/U or equivalent	TM 11-2684
1	Power Supply PP-1104A/G or equivalent	TM 11-5126
1	Handset HS-33 or equivalent	TM 11-2619
1	Signal Generator SG-66/ARM-5	TM 11-518
1	RF Signal Generator Set AN/URM-25	TM 11-5551
1	Milliammeter TS-11/AP or equivalent	
1	Electronic Multimeter TS-505/U or equivalent	TM 11-5511
1	Voltmeter I-50 or equivalent	
1	Multimeter AN/URM-105 or equivalent	TM 11-6625-203-12

*b. Radio Equipment.* The following chart lists standard components used with the MK-252/ARN that are replaced by the components under test.

Quantity	Item	Technical manual
1	Radio Receiver R-455/ARN-30	TM 11-520 or TM 11-5826-207-24
1	Signal Data Converter CV-265/ARN-30A, CV-265A/ARN-30A, or CV-217/ARN-30	TM 11-520 or TM 11-5826-207-24
1a	Filter Amplifier AM-609/ARN-30	TM 11-520

<sup>a</sup>Filter Amplifier AM-609/ARN-30 is required only when Signal Data Converter CV-217/ARN-30 is used.

## CHAPTER 2

### INSTALLATION

#### 8. Unpacking

a. *Packaging Data.* When packed for shipment the components of the bench test kit (par. 5) are placed in the CY-2693/ARN (fig. 2) which, in turn, is placed in a corrugated carton (fig. 3). The corrugated carton is approximately 15½ by 19 by 22 inches. The volume is approximately 3.75 cubic feet and the total weight is approximately 46 pounds.

b. *Removing Contents.*

(1) Remove the staples, which secure the

flaps on the top of the corrugated carton, with a staple remover or other suitable tool.

- (2) Raise the flaps and remove the top corrugated fillers from the corrugated carton.
- (3) Remove the corner corrugated fillers from the corrugated carton.
- (4) Lift the MK-252/ARN out of the carton.

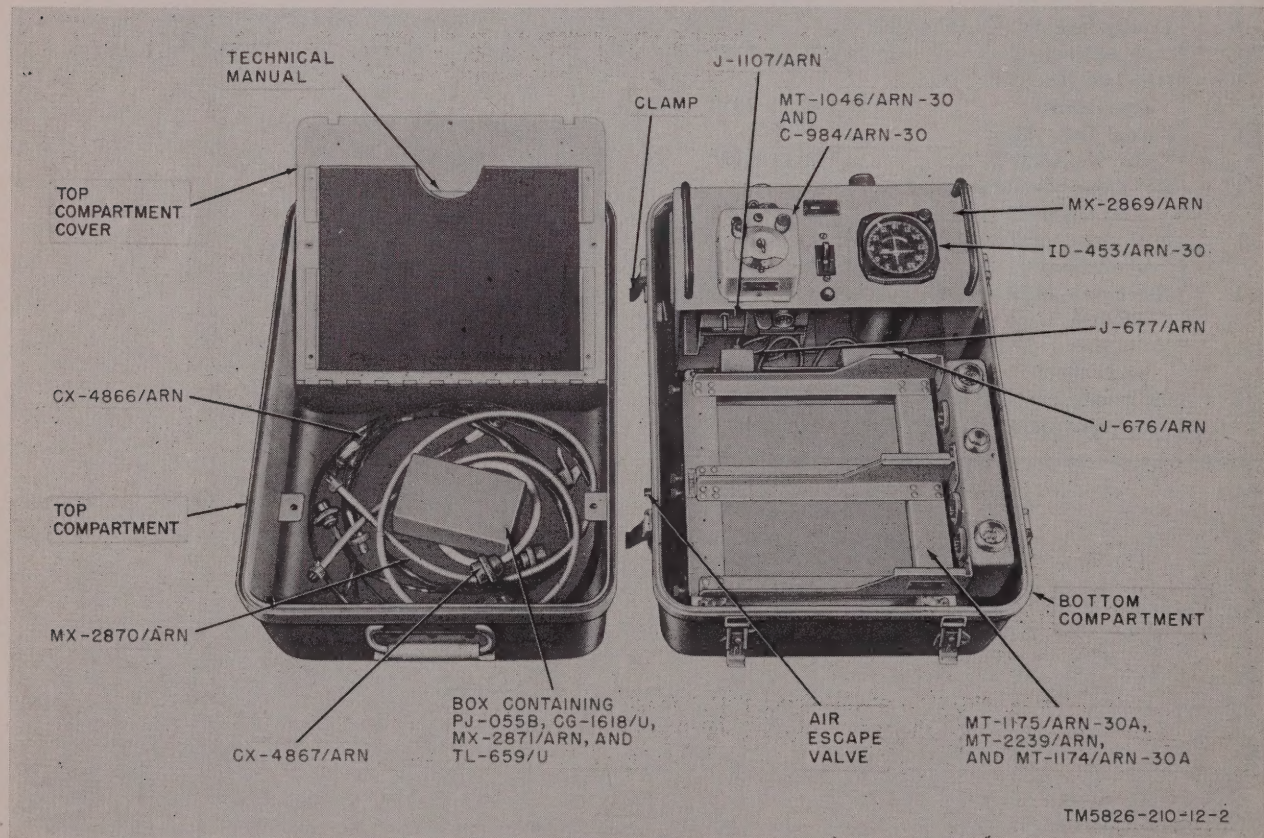
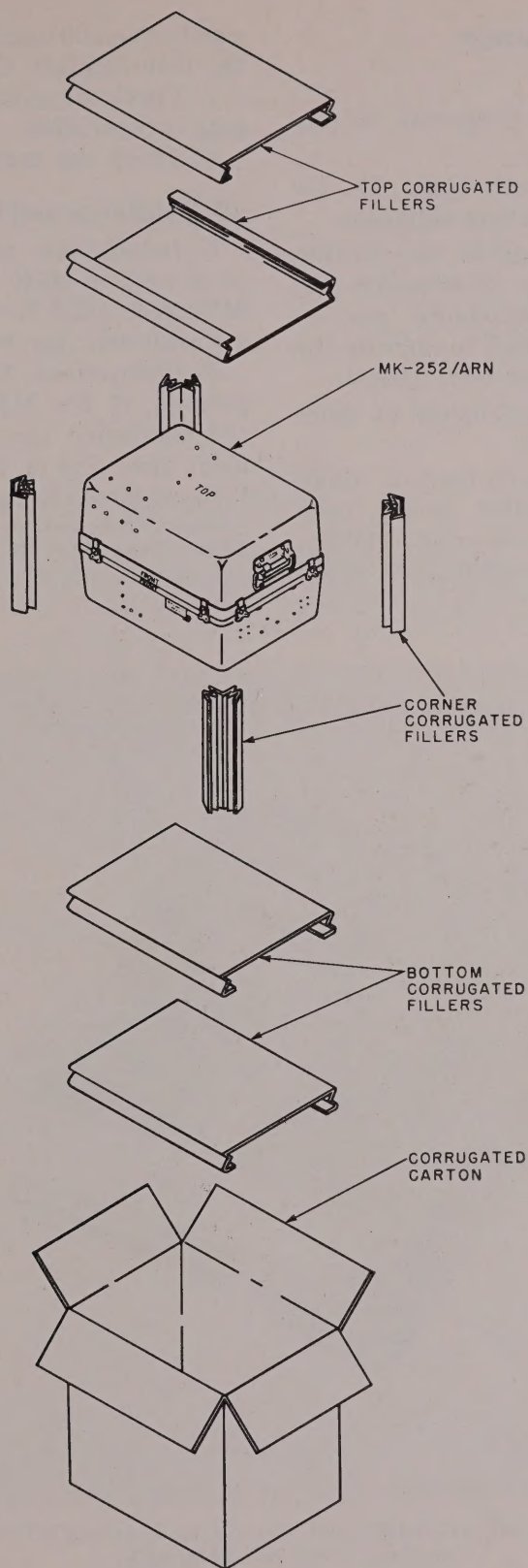


Figure 2. MK-252/ARN, assembled for storage in CY-2693/ARN.



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Figure 3. Packaging diagram.

## 9. Checking Unpacked Equipment

(fig. 2)

a. Unhook the clamps and separate the top and bottom compartments.

b. Inspect each component (par. 5) for possible damage incurred during shipment.

c. Check the equipment against the packing list. When no packing list accompanies the equipment, the table of components (par. 5) may be used as a general check to indicate the equipment which *probably* has been packed.

d. If the equipment is incomplete or damaged, refer to paragraph 2b.

e. If the equipment has been used or reconditioned, check to see whether it has been changed by a modification work order (MWO). If the equipment has been modified, the MWO

number should appear on the front panel, near the nomenclature plate.

f. Check all operating controls (par. 11) for ease of operation.

g. Check the indicator for cracked glass.

## 10. Installation and Connections

a. *Installation.* Secure the MX-2869/ARN to a wall or shelf so that the bottom of the MX-2869/ARN is approximately 1 foot above a workbench; use wood screws.

b. *Connections.* Arrange the remaining components of the MX-252/ARN (par. 5), the test equipment (par. 7a), and the radio equipment (par. 7b) on the workbench and connect them as shown in figure 4.

*Note.* When installing the J-676/ARN and J-677/ARN on the MT-1175/ARN-30A, secure the nut and link retainers (fig. 5).

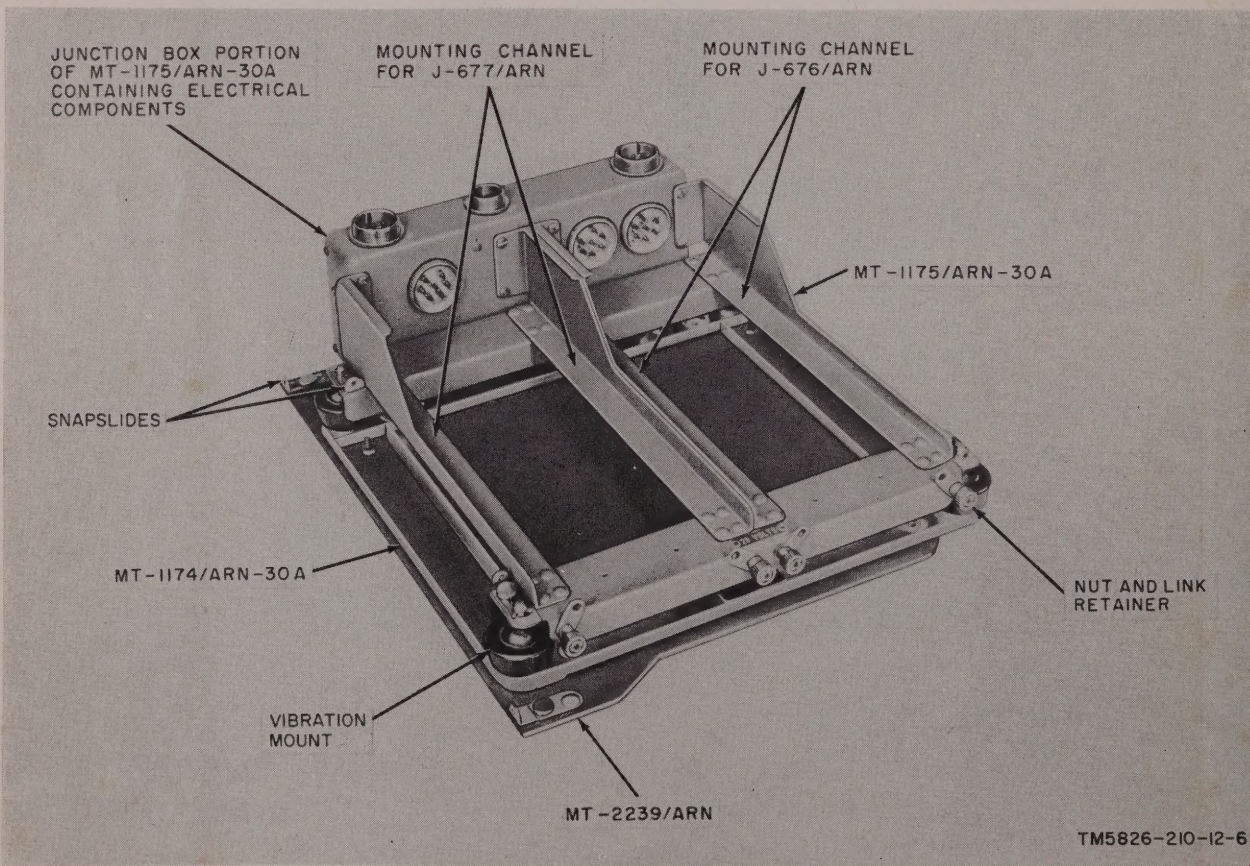


Figure 5. Mounting MT-1175/ARN-30A, mounted on Mounting MT-1174/ARN-30A and Base, Stand MT-2239/ARN.

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TERMINALS  
R J-677/ARN)

SG-66/ARN  
OR SG-66A/

# NOTES:

1. (\*) INDICATES COMPONENTS OF MK-252/ARN.
2. ☐ INDICATES EQUIPMENT MARKING.
3. JUMPER MUST BE CONNECTED ACROSS PINS E AND A OF P101.
4. J-1107/ARN, CX-4867/ARN, AND AM-609/ARN-30 ARE USED ONLY WITH CV-217/ARN-30. WHEN CV-265/ARN-30 OR CV-265A/ARN-30 ARE USED, J-1107/ARN-30, CX-4867/ARN, AND AM-690/ARN-30 ARE NOT USED.
5. FOR ACCURATE TUNING OF R-445/ARN-30, DISCONNECT MX-2870/ARN AND CONNECT MX-2871/ARN.
6. ON 1 MILLIAMPERE SCALE, TS-11/AP OR TS-505/U MAY BE CONNECTED TO ☐ TUNING METER JACK OF MX-2869/ARN.
7. HS-33 OR TS-505/U MAY BE CONNECTED TO ☐ TEL JACK ON MX-2869/ARN.
8. CONNECTIONS MADE ARE AS FOLLOWS:

FROM		TO	
COMPONENT	PLUG	CONNECTOR	COMPONENT
CX-4866/ARN	P1	J304	MT-1175/ARN-30
	P2	J305	
	P3	J306	
	P4	J1204	MX-2869/ARN
	P6	J1201	
	P7	J1202	
	P8	J1203	
	P5	J501	C-984/ARN-30
CX-4867/ARN	P9	J905	J-1107/ARN
	P10	J302	AM-609/ARN-30

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from

o MK-252/ARN.

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w selected omni-

raft to approach

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lesired frequency

arker) to which  
d.

ARN-30 are used.

## 9. Checking Unpacked Equipment

(fig. 2)

a. Unhook the clamps and separate the top and bottom compartments.

b. Inspect each component (par. 5) for possible damage incurred during shipment.

c. Check the equipment against the packing list. When no packing list accompanies the equipment, the table of components (par. 5) may be used as a general check to indicate the equipment which *probably* has been packed.

d. If the equipment is incomplete or damaged, refer to paragraph 2b.

e. If the equipment has been used or reconditioned, check to see whether it has been changed by a modification work order (MWO). If the equipment has been modified, the MWO

number should appear on the front panel, near the nomenclature plate.

f. Check all operating controls (par. 11) for ease of operation.

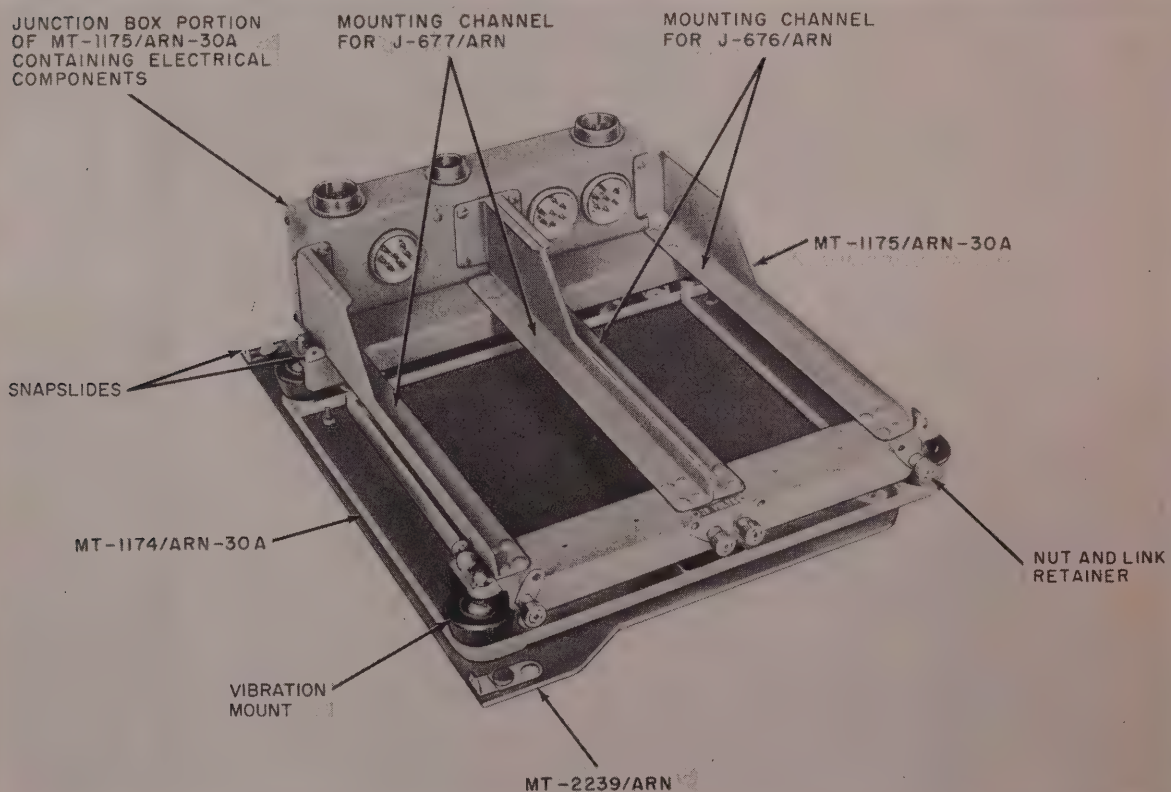
g. Check the indicator for cracked glass.

## 10. Installation and Connections

a. *Installation.* Secure the MX-2869/ARN to a wall or shelf so that the bottom of the MX-2869/ARN is approximately 1 foot above a workbench; use wood screws.

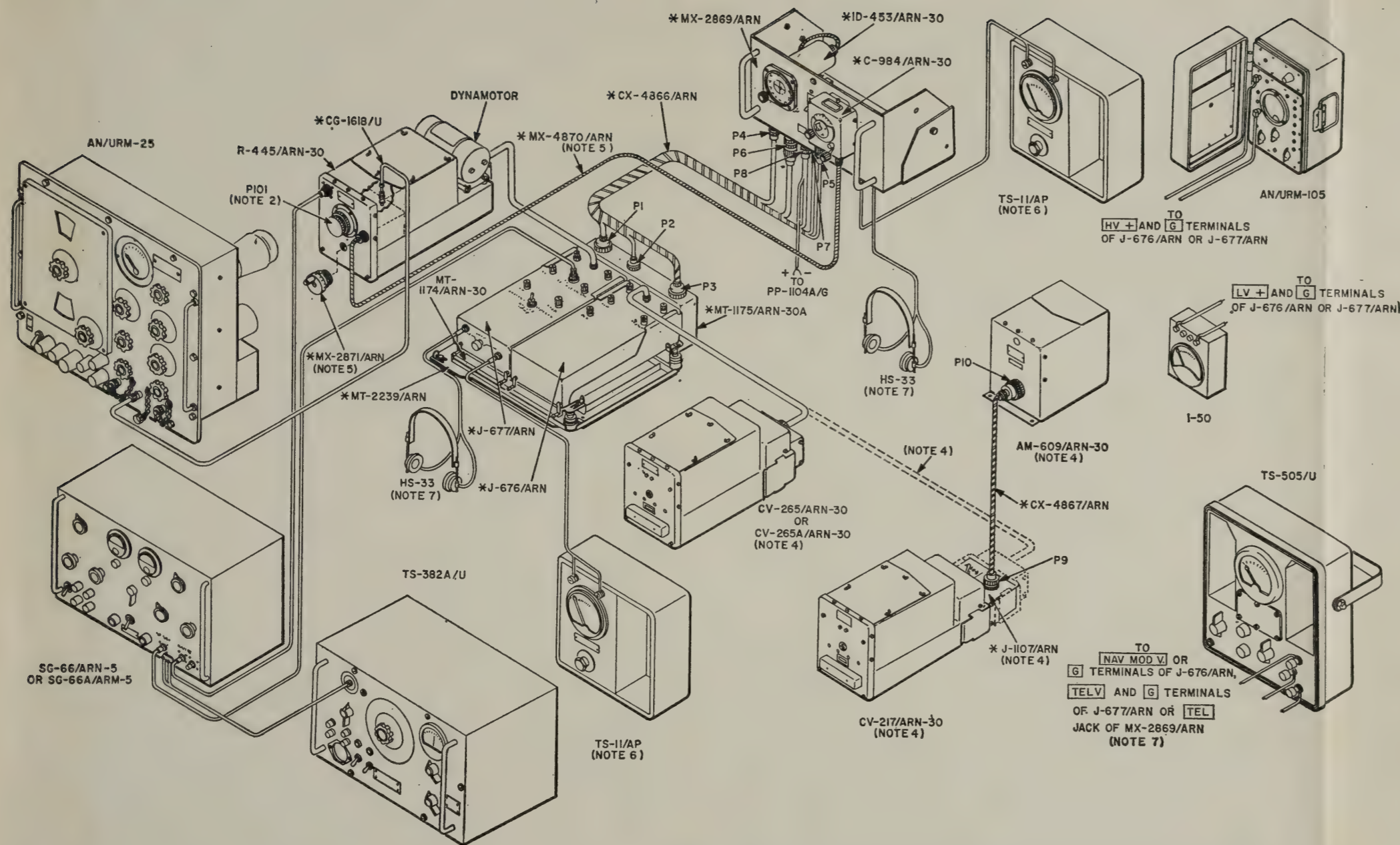
b. *Connections.* Arrange the remaining components of the MX-252/ARN (par. 5), the test equipment (par. 7a), and the radio equipment (par. 7b) on the workbench and connect them as shown in figure 4.

*Note.* When installing the J-676/ARN and J-677/ARN on the MT-1175/ARN-30A, secure the nut and link retainers (fig. 5).




TM5826-210-12-6

Figure 5. Mounting MT-1175/ARN-30A, mounted on Mounting MT-1174/ARN-30A and Base, Stand MT-2239/ARN.



# NOTES:

1. (\*) INDICATES COMPONENTS OF MK-252/ARN.
2.  INDICATES EQUIPMENT MARKING.
3. JUMPER MUST BE CONNECTED ACROSS PINS E AND A OF PI01.
4. J-1107/ARN, CX-4867/ARN, AND AM-609/ARN-30 ARE USED ONLY WITH CV-217/ARN-30. WHEN CV-265/ARN-30 OR CV-265A/ARN-30 ARE USED, J-1107/ARN-30, CX-4867/ARN, AND AM-609/ARN-30 ARE NOT USED.
5. FOR ACCURATE TUNING OF R-445/ARN-30, DISCONNECT MX-2870/ARN AND CONNECT MX-2871/ARN.
6. ON 1 MILLIAMPERE SCALE, TS-11/AP OR TS-505/U MAY BE CONNECTED TO TUNING METER JACK OF MX-2869/ARN.
7. HS-33 OR TS-505/U MAY BE CONNECTED TO TEL JACK ON MX-2869/ARN.
8. CONNECTIONS MADE ARE AS FOLLOWS:

FROM		TO	
COMPONENT	PLUG	CONNECTOR	COMPONENT
CX-4866/ARN	P1	J304	MT-1175/ARN-30
	P2	J305	
	P3	J306	
	P4	J1204	MX-2869/ARN
	P6	J1201	
	P7	J1202	
	P8	J1203	
	P5	J501	C-984/ARN-30
CX-4867/ARN	P9	J905	J-1107/ARN
	P10	J302	AM-609/ARN-30

Figure 4. Connection diagram, showing MK-252/ARN with additional equipment required.



# CHAPTER 3

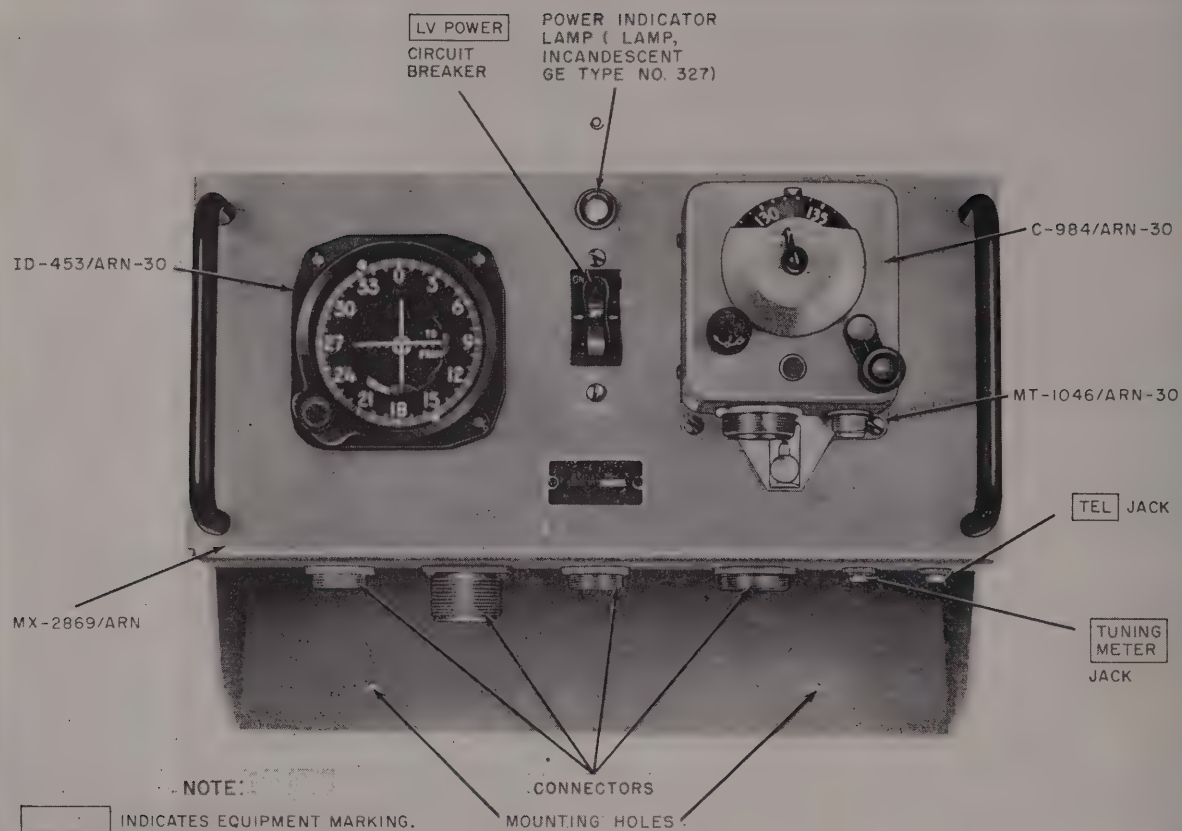
## OPERATING INSTRUCTIONS

### II. Controls, Jacks, and Indicators

#### a. Test Set Subassembly MX-2869/ARN.

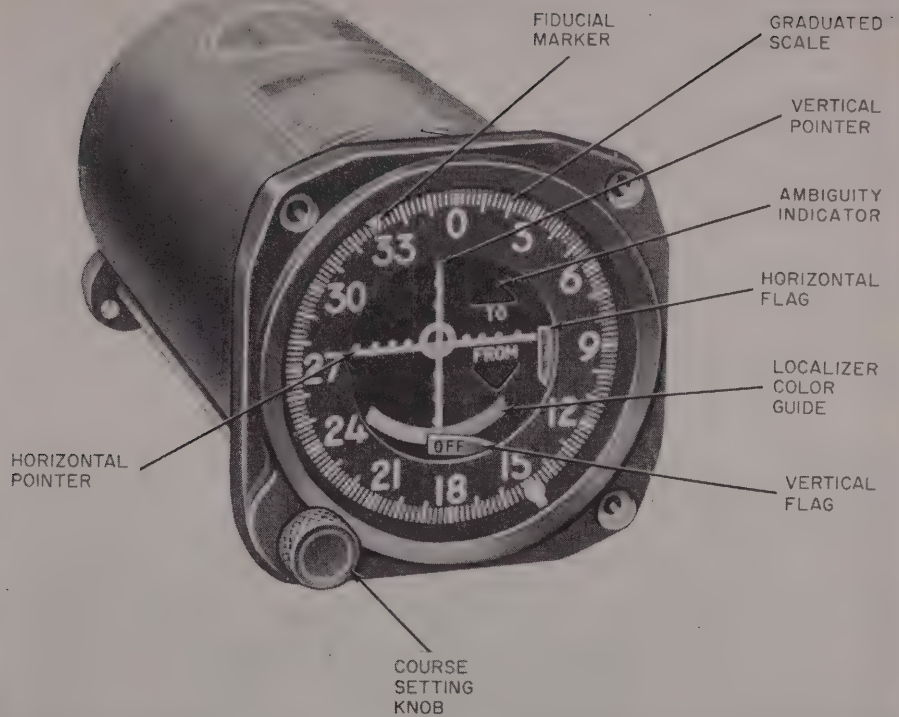
Control, jack, or indicator	Function						
LV POWER circuit breaker (fig. 6).	<table> <tr> <th>Position</th><th>Function</th></tr> <tr> <td>ON</td><td>Applies dc power to MK-252/ARN.</td></tr> <tr> <td>OFF</td><td>Removes dc power from MK-252/ARN.</td></tr> </table>	Position	Function	ON	Applies dc power to MK-252/ARN.	OFF	Removes dc power from MK-252/ARN.
Position	Function						
ON	Applies dc power to MK-252/ARN.						
OFF	Removes dc power from MK-252/ARN.						
Power indicator lamp .....	Indicates when dc power is applied to MK-252/ARN.						
TEL jack .....	Provides connection for headset.						
TUNING METER jack .....	Provides connection for milliammeter.						
Indicator, Course ID-453/ARN-30 including: Vertical pointer (fig. 7)	Provides visual indications for various types of navigational signals.						
Horizontal pointer .....	Indicates <i>fly up</i> or <i>fly down</i> for aircraft to approach on glideslope course.						
Vertical flag	<table> <tr> <th>Position</th><th>Function</th></tr> <tr> <td>In view</td><td>Indicates runway localizer or omnirange signal not being received.</td></tr> <tr> <td>Out of view</td><td>Indicates runway localizer or omnirange signal being received.</td></tr> </table>	Position	Function	In view	Indicates runway localizer or omnirange signal not being received.	Out of view	Indicates runway localizer or omnirange signal being received.
Position	Function						
In view	Indicates runway localizer or omnirange signal not being received.						
Out of view	Indicates runway localizer or omnirange signal being received.						
Horizontal flag	<table> <tr> <th>Position</th><th>Function</th></tr> <tr> <td>In view</td><td>Indicates glideslope signal not being received.</td></tr> <tr> <td>Out of view</td><td>Indicates glideslope signal being received.</td></tr> </table>	Position	Function	In view	Indicates glideslope signal not being received.	Out of view	Indicates glideslope signal being received.
Position	Function						
In view	Indicates glideslope signal not being received.						
Out of view	Indicates glideslope signal being received.						
Ambiguity indicator .....	Indicates when aircraft is flying to or from omnirange station on selected radial.						
Course setting knob .....	Selects desired radial for flying over omnirange station by positioning fiducial marker over graduated scale.						
Localizer color guide .....	Indicates <i>fly left</i> when vertical crosspointer is in yellow portion and indicates <i>fly right</i> when vertical crosspointer is in blue portion.						
Control, Radio Set C-98/ARN-30 (fig. 6) including: Volume control and OFF switch (fig. 8).	Provides operating control of the receiver and converter of AN/ARN-30(*).						
VHF switch <sup>a</sup>	Controls dc power to receiver and converter of AN/ARN-30(*) and controls level of audio output at TEL jack.						
Tuning crank .....	<table> <tr> <th>Position</th><th>Function</th></tr> <tr> <td>OMNI</td><td>Activates omnicircuits in converter.</td></tr> <tr> <td>VAR LOC</td><td>Activates visual aural range and localizer circuits in converter.</td></tr> </table>	Position	Function	OMNI	Activates omnicircuits in converter.	VAR LOC	Activates visual aural range and localizer circuits in converter.
Position	Function						
OMNI	Activates omnicircuits in converter.						
VAR LOC	Activates visual aural range and localizer circuits in converter.						
Frequency calibrated dial.	Tunes receiver of AN/ARN-30(*) to desired frequency when mechanical linkage is used. Indicates frequency (under fiducial marker) to which receiver of AN/ARN-30(*) is tuned.						

<sup>a</sup>Inoperative when Signal Data Converter CV-217/ARN-30 and Filter Amplifier AM-609/ARN-30 are used.



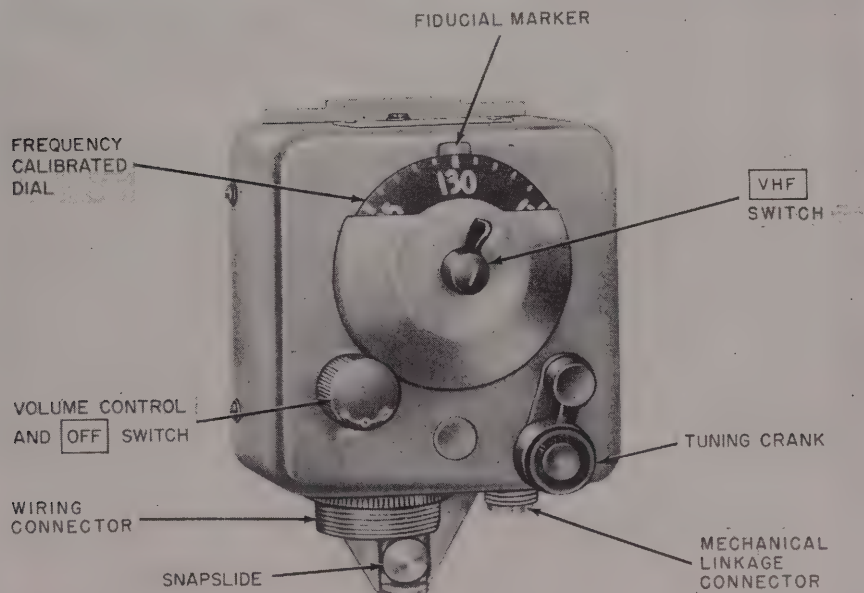
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*Figure 6. Test Set, Subassembly MX-2869/ARN.*



TM5826-210-12-4

Figure 7. Indicator, Course ID-453/ARN-30.



NOTE:

INDICATES EQUIPMENT MARKING.

TM5826-210-12-5

Figure 8. Control, Radio Set C-984/ARN-30.

b. Interconnecting Box J-676/ARN (fig.9 ).

Test jack	Function
G test jack (left side) .....	Provides ground connection for dc measurements.
LV+ test jack .....	Provides dc voltmeter connection for measuring low-voltage circuit of converter in AN/ARN-30(*).
HV+ test jack .....	Provides voltmeter connection for measuring dc high-voltage (B+) circuit of converter in AN/ARN-30(*).
G test jack (right side) .....	Provides ground connection for ac measurements.
NAV MOD V. test jack .....	Provides ac vtm connection for measuring navigational input voltage to converter in AN/ARN-30(*).

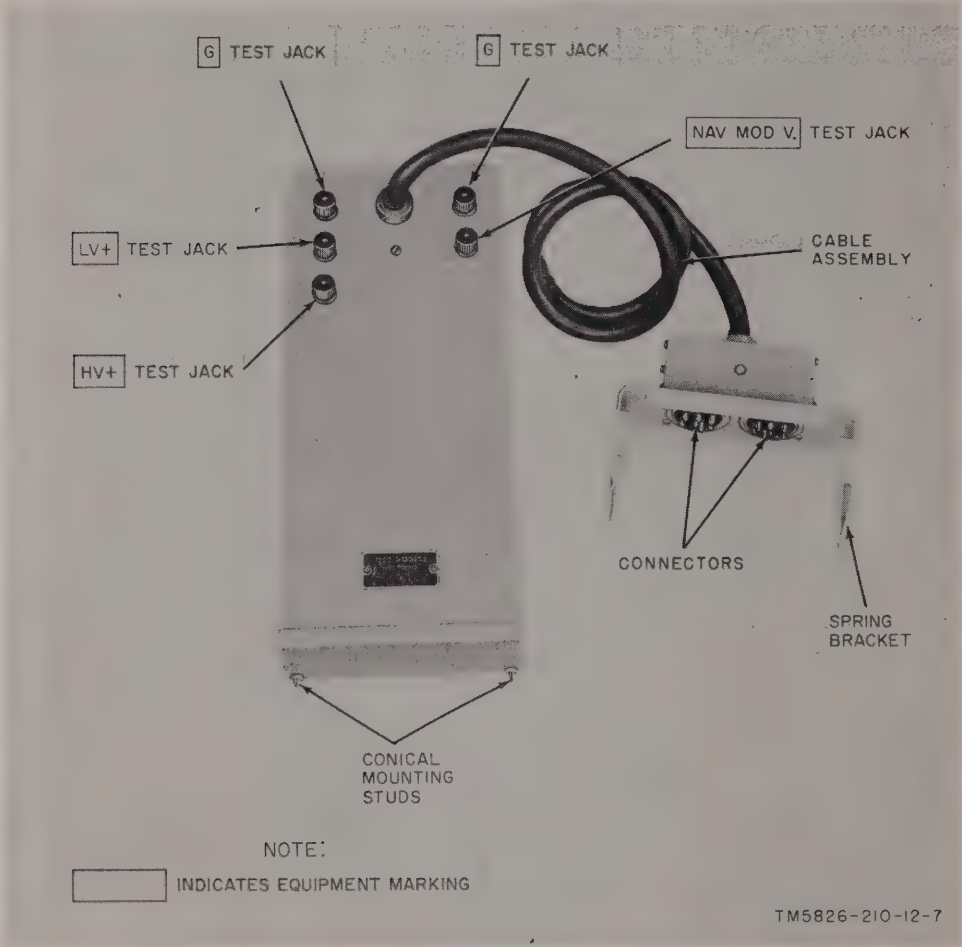


Figure 9. Interconnecting Box J-676/ARN.

Control or test jack	Function						
NAV MOD SOURCE selector switch.	<table> <tr> <th>Position</th><th>Function</th></tr> <tr> <td>Receiver</td><td>Applies receiver output of AN/ARN-30(*) to converter of AN/ARN-30(*).</td></tr> <tr> <td>External</td><td>Applies vhf signal generator output to converter of AN/ARN-30(*).</td></tr> </table>	Position	Function	Receiver	Applies receiver output of AN/ARN-30(*) to converter of AN/ARN-30(*).	External	Applies vhf signal generator output to converter of AN/ARN-30(*).
Position	Function						
Receiver	Applies receiver output of AN/ARN-30(*) to converter of AN/ARN-30(*).						
External	Applies vhf signal generator output to converter of AN/ARN-30(*).						
RF SENS control .....	Controls rf gain of receiver in AN/ARN-30(*).						
G test jack (left side) .....	Provides dc voltmeter ground connection.						
LV+ test jack .....	Provides dc voltmeter connection for measuring low-voltage circuit of receiver in AN/ARN-30(*).						
HV+ test jack .....	Provides dc voltmeter connection for measuring high-voltage (B+) circuit of receiver in AN/ARN-30(*).						
G test jack (right side) .....	Provides ac vtm ground connection.						
NAV MOD V. test jack .....	Provides ac vtm connection for measuring navigational output voltage of receiver in AN/ARN-30(*).						
TEL V. test jack .....	Provides vtm connection for measuring audio output voltage of receiver in AN/ARN-30(*).						
EXT NAV MOD input jack .....	Provides connection for external navigation modulating source.						
TEL test jack .....	Provides connection for headset monitoring or meter checking of receiver audio output.						
CATHODE CURRENT test jack .....	Provides milliammeter connection for measuring cathode current in first rf and first if amplifier stages in receiver of AN/ARN-30(*).						

## d. Interconnecting Box J-1107/ARN

(fig. 11).

Control or test jack	Function						
Selector switch	<table> <tr> <th>Position</th><th>Function</th></tr> <tr> <td>AM-609</td><td>Connects AM-609/ARN-30 to J-676/ARN.</td></tr> <tr> <td>CV-217</td><td>Connects CV-217/ARN-30 to J-676/ARN.</td></tr> </table>	Position	Function	AM-609	Connects AM-609/ARN-30 to J-676/ARN.	CV-217	Connects CV-217/ARN-30 to J-676/ARN.
Position	Function						
AM-609	Connects AM-609/ARN-30 to J-676/ARN.						
CV-217	Connects CV-217/ARN-30 to J-676/ARN.						

## 12. Preliminary Operating Procedures

## a. Inspection.

- (1) Check the PP-1104A/G output; it should be 28 volts direct current (dc).
- (2) Check to see that all connectors are tight.
- (3) Check the tuning crank (fig. 12) of the MX-2871/ARN to be sure that it turns freely.

b. Calibration. Calibrate the receiver of the AN/ARN-30(\*) for remote tuning from the C-984/ARN-30 (fig. 8) by following the procedures given in (1) below. Calibrate the receiver of the AN/ARN-30(\*) for local tuning with the MX-2871/ARN (fig. 1) by following the procedures given in (2) below.

## (1) Remote tuning calibration.

- (a) Turn the tuning crank (fig. 8) completely counterclockwise.

**Caution: Do not force the tuning crank beyond the stop point. Excessive pressure against the stop point will damage the tuning capacitor in the receiver of the AN/ARN-30(\*).**

- (b) Disconnect either end of the MX-2870/ARN (fig. 4).
- (c) Turn the tuning crank (fig. 8) until the small white dot near the high-frequency end of the dial appears directly under the fiducial marker.

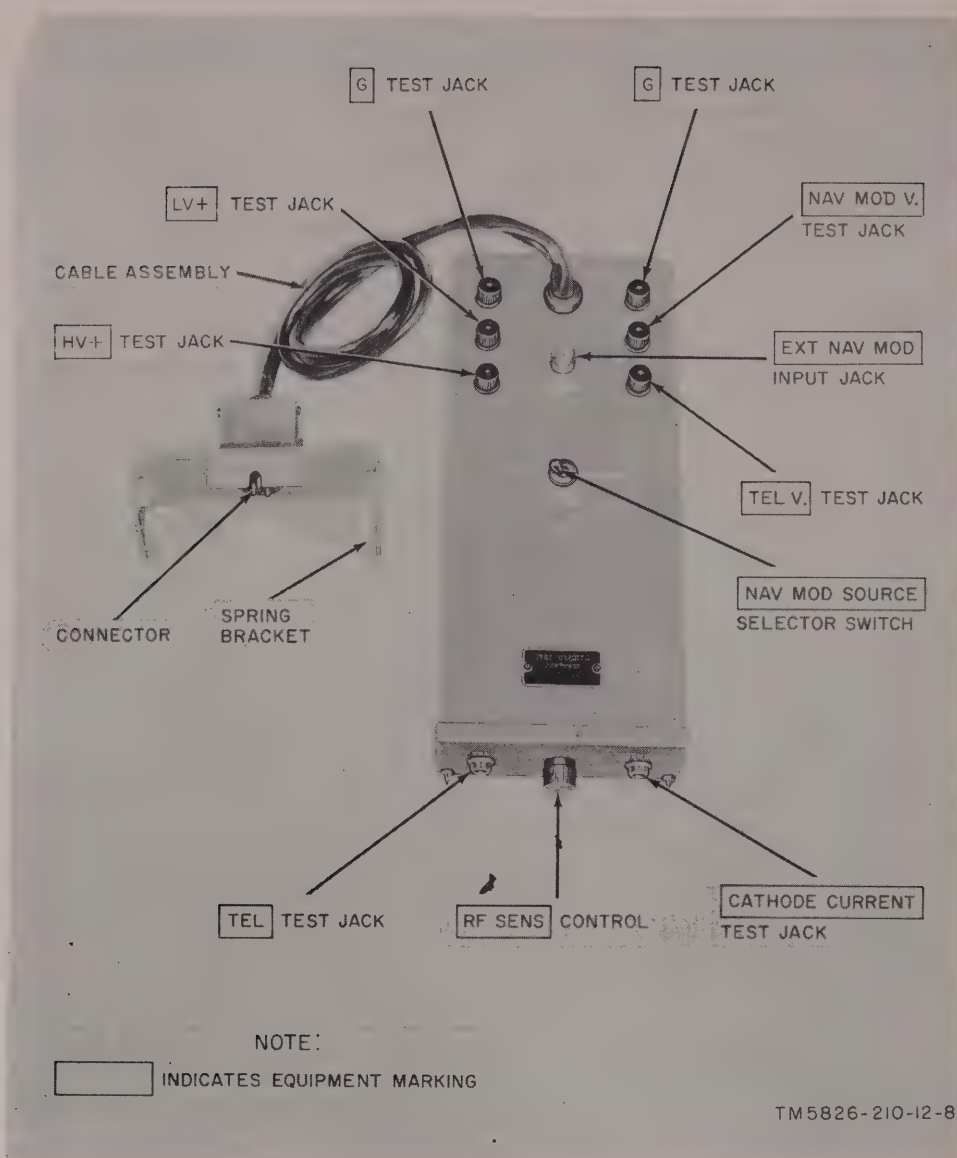


Figure 10. Interconnecting Box J-677/ARN.

- (d) Hold the tuning crank in this position and reconnect the MX-2870/ARN (fig. 4).
  - (2) *Local tuning calibration.*
    - (a) Disconnect the MX-2870/ARN (fig. 4).
    - (b) Fit the MX-2871/ARN (fig. 12) over the splined shaft on the receiver of the AN/ARN-30(\*).
    - (c) Tighten the knurled nut of the MX-2871/ARN completely counterclockwise.
    - (d) Turn the tuning crank completely counterclockwise.
- Caution:** Do not force the tuning crank beyond the stop point. Excessive pressure against the stop point will damage the tuning capacitor in the receiver of the AN/ARN-30(\*).
- (e) Loosen the knurled nut ((c) above) and remove the MX-2871/ARN.
  - (f) Hold the MX-2871/ARN so that the red zero line on its dial is on

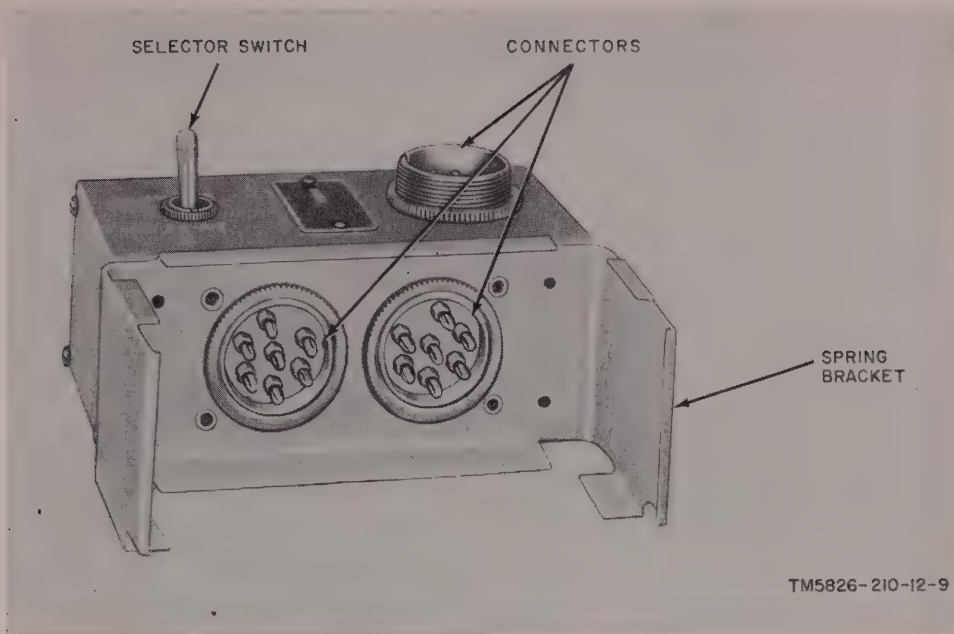


Figure 11. Interconnecting Box J-1107/ARN.

top (12 o'clock position) and replace the MX-2871/ARN.

- (g) Tighten the knurled nut on the MX-2871/ARN.
- (h) Rotate the collar on the MX-2871/ARN until the fiducial marker of its dial is aligned with the red zero line.

### 13. Operating Procedures

The MK-252/ARN is used to facilitate testing components of Radio Receiving Set AN/ARN-30(\*) (par. 3). Instructions covering the use of the MK-252/ARN for tests of the AN/ARN-30 are covered in TM 11-520. Instructions covering the use of the MK-252/ARN for tests of the AN/ARN-30A, and AN/ARN-30B, and AN/ARN-30C are covered in TM 11-5826-207-24.

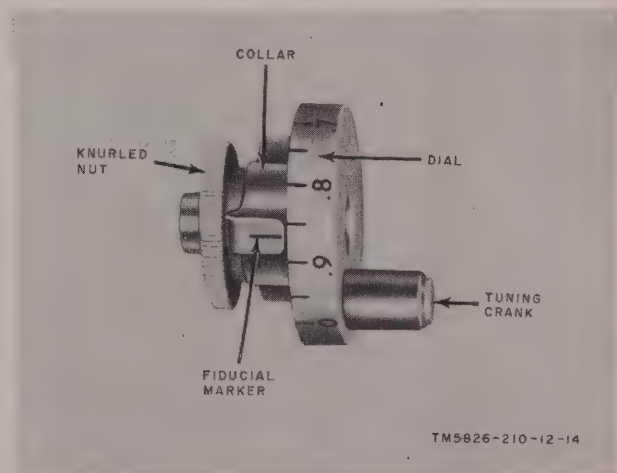


Figure 12. Dial Control MX-2871/ARN.

# CHAPTER 4

## MAINTENANCE INSTRUCTIONS

### 14. General

a. This chapter lists the maintenance duties normally performed by the operator and organizational maintenance personnel of the MK-252/ARN.

b. Operator and organizational maintenance for the test set consists of the following:

- (1) Preventive maintenance (par. 16).
- (2) Visual inspection (par. 17).
- (3) Equipment performance (par. 18).
- (4) Replacement of defective parts (second echelon only) (par. 19).

### 15. Tools and Materials Required

a. *Tools (Second Echelon Only).*

- (1) Screwdriver, 1/4-inch tip.
- (2) Pliers.

b. *Materials.*

- (1) Cleaning compound (Federal stock No. 7930-395-9542).

- (2) Cleaning cloth.
- (3) Sandpaper #000.
- (4) Rubber tape (second echelon only).
- (5) Friction tape (second echelon only).

### 16. Preventive Maintenance

(figs. 13 and 14)

a. *DA Form 11-266.* DA Form 11-266 is a preventive maintenance checklist to be used by the operator and organizational maintenance personnel. Items not applicable to the equipment are lined out. References in the ITEM block are to paragraphs that contain additional maintenance information pertinent to the particular item. Follow the instructions given on the form.

b. *Items.* The information in the chart below supplements DA Form 11-266. The item numbers correspond to the ITEM numbers on the form.

Item	Maintenance procedures
1	Use a clean cloth to remove dust, dirt, moisture, and grease from all the major components. Be careful when cleaning the window of the ID-453/ARN-30 (fig. 7).
3	All control knobs should work smoothly and should not bind. Tighten all loose knobs and be sure that the knobs do not rub against the panel.
4	If the LV POWER circuit breaker (fig. 6) snaps to OFF repeatedly, an abnormal condition exists. Check all cable connections for shorts or frayed insulation.
5 (second echelon only)	Repair any cuts in the insulation of the cable harness or the cable assembly by covering them with rubber tape and then with friction tape.

### 17. Visual Inspection

a. When the equipment fails to perform properly, turn off the power and check for conditions listed in (1) through (6) below.

*Do not perform any check with the power on.*

- (1) Wrong setting of switches and controls.
- (2) Power cable disconnected or poorly connected.

- (3) Cracks in window of indicator.
- (4) Cable harness frayed and defective.
- (5) Connectors defective or poorly connected.
- (6) Mechanical linkage defective.

b. If the checks above do not locate the trouble, proceed to the equipment performance checklist (par. 18).

**MAINTENANCE CHECK LIST FOR SIGNAL EQUIPMENT  
TEST EQUIPMENT**  
(AR 750-625)

EQUIPMENT NOMENCLATURE

*Maintenance Kit, Electronic Equipment, MK-252/ARN*

EQUIPMENT SERIAL NUMBER

*23*

**INSTRUCTIONS**

This form may be used for a period of one month by using the correct dates and weeks of the month. It is to be used as a Preventive Maintenance check list for Signal equipment in actual use, or for a check on equipment prior to issue.

1. For detailed Preventive Maintenance instructions see:

- a. The Technical Manual (in TM 11 series) for the equipment.  
(See DA Pamphlet Number 310-4)
- b. The Supply Bulletin (SB 11-100 series) for the equipment.  
(See DA Pamphlet Number 310-4)
- c. The Department of the Army Lubrication Order.  
(See DA Pamphlet Number 310-4)

2. The following action will be taken by either the Communications Officer/Chief for 1st echelon, or the Inspector for higher echelon

- a. Enter Equipment Nomenclature and Serial Number.
- b. Strike out items that do not apply to the equipment.

3. Operator/Inspector will enter in the columns entitled **CONDITION**, on the proper line, a notation regarding the condition, using symbols specified under **LEGEND**.

4. After operator completes each daily inspection he will initial over the appropriate dates under "Daily Condition for Month", then return form to his supervisor.

TYPE OF INSPECTION.

OPER- ATOR	2/3 ECH- ELON	DATE	SIGNATURE
✓		5 March 60	Charles W. Brown

FOLD

**DA FORM 11-266**  
1 MAY 57

Figure 13. DA Form 11-266, pages 1 and 4.

LEGEND for marking conditions: Satisfactory, ✓ Adjustment, Repair or Replacement required, X. Defect corrected, (X).		DAILY CONDITION FOR MONTH OF																															
NO.	DAILY ITEM																																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
1.	CLEAN DIRT AND MOISTURE FROM EXPOSED SURFACES OF HOUSINGS, CASES, <del>CABINETS</del> , CONTROL PANELS, INTER-CONNECTING PLUGS, CABLES, <del>HEADSETS</del> , METER WINDOWS, ETC.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2.	INSPECT FOR LOOSENESS OF EXTERIOR ITEMS SUCH AS SWITCHES, KNOBS, JACKS, CONNECTORS AND PILOT LIGHTS.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3.	INSPECT CONTROLS FOR BINDING, SCRAPING. TAP CONTROLS LIGHTLY FOR CUT-OUT DUE TO LOOSE CONTACTS.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4.	DURING OPERATION BE ALERT FOR ANY UNUSUAL PERFORMANCE OR CONDITION.	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
WEEKLY		ADDITIONAL ITEMS FOR 2D AND 3D ECHELON INSPECTIONS																															
		CONDITION EACH WEEK																															
		1ST	2D	3D	4TH	5TH																											
5.	INSPECT CORDS, CABLES, WIRE AND SHOCK MOUNTS FOR BREAKS, CUTS, KINKS, DETRIORATION, STRAIN AND FRAYING.	✓																															
6.	INSPECT CANVAS AND LEATHER ITEMS FOR FUNGUS, FRAYING, TEARS, BROKEN ZIPPERS AND SNAP FASTENERS.	✓																															
7.	HAND CHECK FOR LOOSENESS OF EXTERIOR ITEMS SUCH AS HANDLES, LATCHES, HINGES.	✓																															
8.	INSPECT FOR LUBRICATION IN ACCORDANCE WITH APPLICABLE MAINTENANCE ORDER.	✓																															
9.	INSPECT DRY BATTERIES FOR DIRT, LOOSE TERMINALS AND LEAKAGE.	✓																															
10.	INSPECT EXPOSED METAL SURFACES FOR RUST AND CORROSION.	✓																															
11.	INSPECT METER GLASS AND CASES FOR DAMAGED	✓																															
ADDITIONAL ITEMS FOR 2D AND 3D ECHELON INSPECTIONS		CONDITION																															
12.	INSPECT SEATING OF READILY ACCESSIBLE ITEMS OF A PLUCK-OUT NATURE: CRYSTALS, FUSES, CONNECTORS, PLUG-IN COILS, LAMPS, ETC. DO NOT REMOVE, ROCK OR TWIST TO INSPECT. USE ONLY A DIRECT PRESSURE TO INSURE THE ITEM IS FULLY SEATED.	✓																															
13.	INSPECT FOR CLEANLINESS AND TIGHTNESS OF SUCH ITEMS AS SHOCK MOUNTS, ANTENNA MOUNTS AND WAVE GUIDES.	✓																															
14.	INSPECT RELAY AND CIRCUIT BREAKER ASSEMBLIES FOR DIRT, CORROSION, WORN OR BURNED CONTACTS.	✓																															

Figure 14. DA Form 11-266, pages 2 and 3.

## 18. Equipment Performance Checklist

*a General.* The equipment performance checklist provides a procedure for systematically checking equipment performance. All corrective measures that the operator and the organizational maintenance man can perform are given in the *Corrective measures* column. When using the checklist, start at the begin-

ning and follow each step in order. If the corrective measures indicated do not correct the fault, troubleshooting by higher echelon is required. Note on the repair tag how the equipment performed and the corrective measures that were taken.

*b. Checklist.* Perform the procedures listed in the chart below.

	Item No.	Item	Action or condition	Normal indication	Corrective measures
PREPARATORY	1	MX-2869/ARN and CX-4866/ARN.	Interconnect equipment (fig. 4) and operate LV POWER circuit breaker switch (fig. 6) to ON.	LV POWER lever (fig. 6) stays in position.	Check for short circuit and/or poor seating of connectors. Check terminals of the circuit breaker. Refer to higher echelon for repair.
	2	C-984/ARN-30 .....	Turn volume control and OFF switch to the right until a click is heard.	Power indicator lamp illuminates. Power relay in rack clicks. Tubes in receiver of AN/ARN-30 (*) light, and dynamotor runs.	Replace power indicator lamp (par. 19a). Check for proper seating of connectors. Check receiver of AN/ARN-30 (*). Check relay in MT-1175/ARN-30A.
EQUIPMENT PERFORMANCE	3	J-677/ARN .....	Measure voltages at test jacks.	Normal voltages present (TM 11-520 or TM 11-5826-207-24).	Check dynamotor of receiver in AN/ARN-30 (*). Check seating of all connectors. Replace J-677/ARN.
	4	J-676/ARN .....	Measure voltages at test jacks.	Normal voltages present.	Check converter of AN/ARN-30 (*) Check seating of all connectors. Replace J-676/ARN.
	5	J-1107/ARN and CX-4867/ARN.	Connect J-1107/ARN and CX-4866/ARN and measure voltages present at test jacks of J-676/ARN for each position of the selector switch on the J-1107/ARN.	Normal voltages present.	Check AM-609/ARN-30 and CV-217/ARN-30. Check seating of connectors. Substitute J-1107/ARN and CX-4867/ARN by connecting CV-217/ARN-30 directly to J-676/ARN.

b. Checklist—continued

EQUIPMENT PERFORMANCE	Item No.	Item	Action or condition	Normal indication	Corrective measures
	6	CG-1618/U .....	Align if stages of receiver in AN/ARN-30 (*).	Receiver of AN/ARN-30 (*) aligns properly.	Check receiver of AN/ARN-30 (*). Check CG-1618/U. Check connections.
	7	ID-453/ARN-30 .....	During alignment of navigational portion of the AN/ARN-30 (*), the vertical pointer, to-from pointer, and the vertical flag alarm will operate.	Audio tone present at TEL test jack of J-677/ARN.  Audio tone present at TEL test jack on MX-2869/ARN. (Intensity of audio tone should vary with setting of volume control and OFF switch (fig. 8).)	Check TEL test jack for proper connection and good spring action.  Check seating of connectors.  Check TEL test jack for proper connection and good spring action.  Check for smooth action of OFF control on C-984/ARN-30.

## 19. Replacement of Defective Parts (Second Echelon Only)

### a. Replacement of Power Indicator Lamp (fig. 6).

- (1) Turn the jewel of the power indicator lamp counterclockwise and remove it.
- (2) Remove the power indicator lamp from its socket and replace it with a new one.
- (3) Replace the jewel of the power indicator lamp by turning it clockwise into the front panel (fingertight) to secure item.

### b. Replacement of Major Components.

- (1) MX-2869/ARN (fig. 6). Disconnect all wires and cables, and remove the test unit from the test bench. Replace the MX-2869/ARN by following installation instructions given in paragraph 10.
- (2) J-676/ARN. Disconnect the CX-4867/ARN of the J-676/ARN (fig.

9). Loosen the nut and link retainers on the front of the MT-1175/ARN-30A (fig. 5) and slide the J-676/ARN out of the MT-1175/ARN-30A. Replace the J-676/ARN by following the installation instructions given in paragraph 10.

- (3) J-677/ARN. Disconnect the CX-4866/ARN from the J-677/ARN (fig. 10). Loosen the nut and link retainers on the front of the MT-1175/ARN-30A (fig. 5) and slide the J-677/ARN out of the MT-1175/ARN-30A. Replace the J-677/ARN by following the installation instructions given in paragraph 10.
- (4) MT-1175/ARN-30A (fig. 5). Remove the rack from the base assembly. Remove the J-676/ARN and J-677/ARN as instructed in (3) and (4) above; the MT-1175/ARN-30A is now free for replacement. Replace the MT-1175/ARN-30A (fig. 4).

# CHAPTER 5

## SHIPMENT AND LIMITED STORAGE AND DEMOLITION TO PREVENT ENEMY USE

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### Section I. SHIPMENT AND LIMITED STORAGE

#### 20. Disassembly of Equipment

Disassemble the MK-252/ARN as follows:

- a. Disconnect the CX-4866/ARN (fig. 4).
- b. Disconnect the J-676/ARN and J-677/ARN and remove them from the MT-1175/ARN-30A.
- c. Disconnect the MX-2870/ARN and tape the ends.
- d. Disconnect the J-1107/ARN and the CX-4867/ARN.
- e. Place the MX-2871/ARN, the TL-659/U, the CG-1618/U, and the PJ-055B in a cardboard box. Stuff the cardboard box with tissue paper to protect these components.
- f. Place all the equipment in the CY-2693/ARN (fig. 2) and close the cover in the top compartment.

g. Close the top and bottom compartments of the CY-2693/ARN and secure them with the clamps.

*Note.* A spare receiver and converter of the AN/ARN-30(\*) (par. 7b) may be stored on the MT-1175/ARN-30A.

#### 21. Repackaging for Shipment or Limited Storage

a. The procedure for repackaging depends on the material available and the conditions under which the equipment is to be shipped or stored.

b. If the original carton is available, pack the equipment first in the CY-2693/ARN (fig. 2) and then in the corrugated carton; use the corrugated fillers as shown in figure 3.

c. If a carton is not available, or only limited storage is desired, pack the equipment in the CY-2693/ARN as shown in figure 2.

### Section II. DEMOLITION OF MATERIEL TO PREVENT ENEMY USE

#### 22. Authority for Demolition

Demolition of the equipment will be accomplished only upon the order of the commander. The destruction procedures outlined in paragraph 23 will be used to prevent further use of the equipment.

#### 23. Methods of Destruction

Any or all of the methods of destruction given below may be used. The time available will be the major factor in determining destruction methods.

a. *Smash.* Smash the J-676/ARN, J-677/ARN, ID-453/ARN-30, all connectors, the J-1107/ARN, and the MT-1175/ARN-30A; use sledges, axes, hammers, crowbars, and any

other heavy tools.

b. *Cut.* Cut the CX-4866/ARN, the CX-4867/ARN, and the connecting cables of the J-676/ARN and J-677/ARN; use axes, hand-axes, or machetes.

c. *Burn.* Burn the instruction manuals and wiring; use gasoline, oil, flamethrowers, or incendiary grenades.

d. *Bend.* Bend panels and frames.

e. *Explode.* If explosives are necessary, use firearms, grenades, or TNT.

f. *Dispose.* Bury or scatter destroyed parts in slit trenches, foxholes, or throw them into streams.

# APPENDIX I

## REFERENCES

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Following is a list of applicable references available to the operator and organizational maintenance personnel of Maintenance Kit, Electronic Equipment MK-252/ARN.

AR 700-38	Unsatisfactory Equipment Report (Reports Control Symbol CSGLD-247 (R2)).	TM 11-5126	Power Supply PP-1104A/G.
AR 700-58	Report of Damaged or Improper Shipment.	TM 11-5511	Electronic Multimeter TS-505/U.
TB SIG 219	Operation of Signal Equipment at Low Temperatures.	TM 11-5551	Instruction Book For R-F Signal Generator Set AN/URM-25.
TM 11-518	Radio Test Set AN/ARM-5; Operating Instructions.	TM 11-5826-207-24	Organizational and Field Maintenance: Radio Receiving Sets AN/ARN-30A, AN/ARN-30B, and AN/ARN-30C.
TM 11-520	Radio Receiving Set AN/ARN-30.	TM 11-6625-203-12	Operation and Organizational Maintenance: Multimeter AN/URM-105, Including Multimeter ME-77/U.
TM 11-2619	Radio Control Central AN/TRQ-1( ).		
TM 11-2684	Audio Oscillators TS-312/FSM-1, TS-312A/FSM-1, and TS-382/U, and Signal Generator TS-312B/FSM-1.		

## APPENDIX II

### MAINTENANCE ALLOCATION

#### I. General

The maintenance allocation portion of this manual assigns maintenance functions and repair operations to be performed by the lowest appropriate maintenance echelon. It also specifies the tools and other equipment authorized at each echelon to perform the assigned maintenance functions.

#### 2. Maintenance Allocation Chart

*a. Part of Component.* Column 1 shows only the nomenclature or standard item name. Additional descriptive data are included only where clarification is necessary to identify the part. Components and parts comprising a major end item are listed alphabetically. Assemblies and subassemblies are in alphabetical sequence with their components listed alphabetically immediately below the assembly listing.

*b. Maintenance Function.* Column 2 indicates the various maintenance functions allocated to the echelon capable of performing the operation. These are defined as follows:

- (1) *Service.* To clean, to preserve, and to replenish fuel and lubricants.
- (2) *Inspect.* To verify serviceability and to detect incipient electrical or mechanical failure by scrutiny.
- (3) *Test.* To verify serviceability and to detect incipient electrical or mechanical failure by use of special equipment such as gages and meters.
- (4) *Replace.* To substitute serviceable assemblies, subassemblies, and parts for unserviceable components.
- (5) *Repair.* To restore to a serviceable condition by replacing unserviceable parts or by any other action required utilizing tools, equipment, and skills available, to include welding, grinding, riveting, straightening, adjusting, etc.
- (6) *Rebuild.* To restore to a condition comparable to new by disassembling the item to determine the condition of its component parts and reassembling it using serviceable, rebuilt, or new assemblies, subassemblies, and

parts.

*c. 1st, 2d, 3d, 4th, and 5th Echelon.* The symbol X in column 3, 4, 5, 6, or 7 indicates the echelon responsible for performing that particular maintenance operation, but does not necessarily indicate that repair parts will be stocked at that level. Echelons higher than the echelon marked by X are authorized to perform the indicated operation.

*d. Tools Required.* This column indicates codes assigned to each individual tool equipment, test equipment, and maintenance equipment referenced. The grouping of codes in this column of the maintenance allocation chart indicates the tool, test, and maintenance equipment required to perform the maintenance function.

*e. Remarks.* Entries in this column will be utilized when necessary to clarify any of the data cited in the preceding columns.

#### 3. Allocation of Tools for Maintenance Functions

*a. Tools Required for Maintenance Functions.* This column lists tools, test, and maintenance equipment required to perform the maintenance functions.

*b. 1st, 2d, 3d, 4th, and 5th Echelon.* A dagger (†) symbol indicates the echelons allocated the facility.

*c. Tool Code.* This column lists the tool code assigned.

*d. Remarks.* Column 8 is not used.

#### 4. Maintenance by Using Organizations

When this equipment is used by signal service organizations organic to theater headquarters or communication zones to provide theater communications, those maintenance functions allocated up to and including fourth echelon are authorized to the organization operating this equipment.

#### 5. Mounting Hardware

The basic entries of this maintenance allocation chart do not include mounting hardware such as screws, nuts, bolts, washers, brackets, clamps, etc.

# MAINTENANCE ALLOCATION CHART

(a)

(g)

(7)

(6)

(5)

(4)

(3)

(2)

(1)

PART OR COMPONENT	MAINTENANCE FUNCTION	1ST ECH.	2ND ECH.	3RD ECH.	4TH ECH.	5TH ECH.	TOOLS REQUIRED	REMARKS
MAINTENANCE KIT, ELECTRONIC EQUIPMENT MK-252/ARN	service inspect test replace repair- rebuild		X	X X X X		X	3  1,2	Visual
CABLE ASSEMBLY, SPECIAL PURPOSE, ELECTRICAL	replace	X		X				
CX-4867/ARN	repair			X				Fabricated at 4th echelon
BAND, MARKER CABLE	replace			X				
CONNECTOR	replace			X				
WIRE	replace			X				
CONTROL, RADIO SET C-984/ARN-30	replace		X	X				
	repair			X		X		Fabricate at 4th echelon
BASE	rebuild			X				Fabricate at 4th Echelon
BOX	replace			X				Fabricate at 4th echelon
CLIP	replace			X				Fabricate at 4th echelon
CONNECTOR	replace			X				
CONTACT	replace		X	X				
CRANK	replace		X	X				
DIAL	replace			X				Fabricate at 4th echelon
GEAR	replace			X				Fabricate at 4th echelon
INSULATOR	replace			X				Fabricate at 4th echelon
KNOB	replace			X				Fabricate at 4th echelon
PLATE	replace			X				
POINTER	replace			X				
RESISTOR	replace			X				
ROTOR	replace			X				
SHAFT	replace			X				Fabricate at 4th echelon
SLEEVE	replace			X				Fabricate at 4th echelon
SWITCH	replace			X				Fabricate at 4th echelon
TERMINAL	replace		X	X				
DIAL CONTROL MX-2871/ARN	replace		X	X				
INDICATOR, ID-453/ARN	repair			X				Fabricate at 4th echelon
CONNECTOR	replace			X				Fabricate at 4th echelon
PLATE	replace			X				Fabricate at 4th echelon

MAINTENANCE SECTION II

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PART OR COMPONENT	MAINTENANCE FUNCTION	1ST ECH.	2ND ECH.	3RD ECH.	4TH ECH.	5TH ECH.	TOOLS REQUIRED	REMARKS
MK-252/ARN (continued)								
PLATE	replace			X				Fabricate at 4th echelon
SHELL	replace			X				Fabricate at 4th echelon
SWITCH	replace			X				Fabricate at 4th echelon
TERMINAL	replace			X				
LEAD, TEST CG-1618/U	replace		X					
repair				X				Fabricate at 4th echelon
replace				X				
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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
PART OR COMPONENT	MAINTENANCE FUNCTION	1ST ECH.	2ND ECH.	3RD ECH.	4TH ECH.	5TH ECH.	TOOLS REQUIRED	REMARKS
MK-252/ARN (continued)								
BUSHING	replace			X				Fabricate at 4th echelon
CAP	replace			X				
HOSE	replace			X				
SHAFTING	replace			X				
SPLINE	replace		X					
TEST SET, SUB-ASSEMBLY MK-2869/ARN	repair							
	rebuild							
BRACKET	replace			X		X		Fabricate at 4th echelon
CIRCUIT BREAKER , CONNECTOR	replace			X				
COVER	replace			X				Fabricate at 4th echelon
HANDLE	replace			X				Fabricate at 4th echelon
JACK, TIP	replace		X					
LAMP	replace			X				
LIGHT, INDICATOR	replace			X				
PLATE	replace			X				Fabricate at 4th echelon
TERMINAL	replace		X					
WIRING HARNESS, BRANCHED CX-4866/ARN	repair							
BAND, MARKER	replace			X				Fabricate at 4th echelon
CONNECTOR	replace			X				
GROMMET	replace			X				Fabricate at 4th echelon
WIRE	replace			X				

# ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTION

ALLOCATION OF TOOLS FOR MAINTENANCE FUNCTIONS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TOOLS REQUIRED FOR MAINTENANCE FUNCTIONS	1ST ECH	2ND ECH	3RD ECH	4TH ECH	5TH ECH	TOOL CODE	REMARKS
<del>MK-252/ARN (continued)</del>							
MULTIMETER AN/URM-105			+	+	+	1	
OHMMETER ZM-21/U			+	+	+	2	
TOOL EQUIPMENT TE-113			+	+	+	3	Tools and test equipment available to user because of his assigned mission.

# APPENDIX III

## REPAIR PARTS AND SPECIAL TOOL LIST

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### Section I. INTRODUCTION

#### 1. Scope

The repair parts and special tool list of this manual lists items supplied for initial operation and for running spares. The list includes tools, accessories, parts, and material issued as part of the major end item. The list includes all items authorized for basic operator maintenance of the equipment. End items of equipment are issued on the basis of allowances prescribed in equipment authorization tables and other documents that are a basis for requisitioning.

#### 2. Columns

*a. Source, Maintenance, and Recoverability Code.* Not used.

*b. Federal Stock Number.* This column lists the 11-digit Federal stock number.

*c. Designation by Model.* Not used.

*d. Description.* Nomenclature or the standard item and brief identifying data for each item are listed in this column. When requisitioning, enter the nomenclature and description on the requisition.

*e. Unit of Issue.* The unit of issue is the supply term applied to the smallest quantity by which the individual item is counted for procurement, storage, requisitioning, allowances, and issue purposes.

*f. Expendability.* Expendability items are indicated by the letter X; nonexpendable items are indicated by NX.

*g. Quantity Authorized.* Under "Items Comprising an Operable Equipment", the column lists the quantity of items supplied for the initial operation of the equipment. Under "Running Spares and Accessory Items," the quantities listed are those issued initially with the equipment as spare parts. The quantities are authorized to be kept on hand by the operator for maintenance of the equipment.

*h. Illustrations.*

(1) *Illustrations.* Under "Items Comprising an Operable Equipment," the column lists the figure in the manual showing the item.

(2) *Item No.* Not used.

#### 3. Critical Items

A zero slash ( $\phi$ ) in the "Description" column indicates items that are expected to fail during the first year; also items that will make the equipment inoperative if they fail.

#### 4. References

The maintenance allocation chart (appx II) shows all repair operations authorized to be performed by the respective echelons of maintenance.

## FUNCTIONAL PARTS LIST

(1) SOURCE MAINTENANCE AND RECOVERABILITY CODE	(2) FEDERAL STOCK NUMBER	(3) DESIGNATION BY MODEL	(4) DESCRIPTION	(5) UNIT OF ISSUE	(6) EXPENDABILITY	(7) QUANTITY AUTHORIZED	(8) ILLUSTRATIONS FIGURE NO.	(9) ITEM NO.
			ITEMS COMPRISING AN OPERABLE EQUIPMENT					
			MAINTENANCE KIT, ELECTRONIC EQUIPMENT MK-252/ARN					
	5826-681-9881		MAINTENANCE KIT, ELECTRONIC EQUIPMENT MK-252/ARN	ea	NX			
	5120-590-2553		ALIGNMENT TOOL, ELECTRONIC EQUIPMENT TL-659/U	ea	NX	1		
	5826-681-9877		BASE STAND MT-2239/ARN	ea	X	1		
	5995-682-3386		0 CABLE ASSEMBLY SPECIAL PURPOSE ELECTRICAL CX-4867/ARN	ea	X	1		
	5826-681-9860		CASE, ELECTRONIC EQUIPMENT MAINTENANCE KIT CY-2693/ARN	ea	NX	1		
	5826-501-4831		0 CONTROL, RADIO SET C-984/ARN-30	ea	NX	1		
	6625-577-4665		0 DIAL CONTROL MX-2871/ARN	ea	NX	1		
	5826-697-9880		0 INDICATOR, COURSE ID-453/ARN-30	ea	NX	1		
	6625-543-1207		0 INTERCONNECTING BOX J-676/ARN	ea	NX	1		
	6625-542-6460		0 INTERCONNECTING BOX J-677/ARN	ea	NX	1		
	5826-681-9878		0 INTERCONNECTING BOX J-1107/ARN	ea	NX	1		
	6625-302-4771		0 LEAD TEST CG-1618/ARN	ea	X	1		
	5820-355-9219		MOUNTING MT-1046/ARN-30	ea	X	1		
	6625-091-0494		0 MOUNTING MT-1174/ARN-30A	ea	NX	1		
	5826-611-0865		0 MOUNTING MT-1175/ARN-30A	ea	NX	1		
	5935-192-4760		0 PLUG, TELEPHONE PJ-055B	ea	X	1		
	5826-682-4509		0 SHAFT ASSEMBLY FLEXIBLE MX-2870/ARN	ea	X	1		
	5826-682-5111		0 TEST SET, SUB-ASSEMBLY MX-2869/ARN	ea	NX	1		
	5826-708-2218		0 WIRING HARNESS BRANCHED CX-4866/ARN	ea	X	1		
			TEST SET, SUB-ASSEMBLY MX-2869/ARN					
	6240-155-7836		LAMP, INCANDESCENT: GE type No. 327	ea	X	1	6	
			RUNNING SPARES AND ACCESSORY ITEMS					
			MAINTENANCE KIT, ELECTRONIC EQUIPMENT MK-252/ARN					
			NO PARTS AUTHORIZED FOR STOCKAGE AT FIRST ECHELON.					

L. L. LEMNITZER,  
*General, United States Army,*  
*Chief of Staff.*

Official:

R. V. LEE,  
*Major General, United States Army,*  
*The Adjutant General.*

Distribution:

*Active Army:*

Def Atomic Spt Agcy (5)  
USASA (2)  
CNGB(1)  
Tech Stf, DA (1) except  
CSigO (18)  
Tech Stf Bd (1)  
USA Arty Bd (1)  
USA Armor Bd (1)  
USA Inf Bd (1)  
USA AD Bd (1)  
USA Abn & Elct Bd (1)  
USA Avn Bd (1)  
USA ATB (1)  
USCONARC (5)  
US ARADCOM (2)  
US ARADCOM Rgn (2)  
OS Maj Comd (5)  
OS Base Comd (5)  
Log Comd (5)  
MDW (1)  
Armies (5) except  
First US Army (7)  
Corps (2)  
Div (2)  
USATC (2)  
Ft Belvoir (5)  
Svc Colleges (5)  
Br Svc Sch (5) except  
USASCS (25)  
GENDEP (2) except  
Atlanta GENDEP (none)  
Sig Sec, GENDEP (10)  
Sig Dep (17)  
Army Pictorial Cen (2)  
Engr Maint Cen (1)  
USA Ord Msl Comd (3)  
USASSA (15)  
USASSAMRO (1)  
USA Sig Pub Agcy (8)  
USA Sig Engr Agcy (1)

USA Comm Agcy (3)  
USA Sig Eqp Spt Agcy (2)  
USA Sig Msl Spt Agcy (13)  
WRAMC (1)  
AFIP (1)  
AMS (1)  
Ports of Emb (OS) (2)  
Trans Terminal Comd (1)  
Army Terminals (1)  
OS Sup Agcy (1)  
Yuma Test Sta (2)  
USA Elct PG (1)  
Sig Lab (5)  
Sig Fld Maint Shops (3)  
USA Corps (Res) (1)  
JBUSMC (2)  
Units org under fol TOE:  
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39-61 (2)

NG: State AG (3); Units—Same as Active Army except allowance is one copy to each unit.

USAR: None.

For explanation of abbreviations used, see AR-320-50.





